```
                    20              40              60              80             100
                    |               |               |               |               |
Consensus  -------------------------------------------------------------EGKGDGLKEGSLXNDTGLEDETNXAND-N-LXNRQQM-GNKKKQA-GGR  45
      1.1  -------------------------------------------------------------MD..TVT.LAMA.GVEK.K.-.G.DR..RETNQSE.E.-RK.          40
      1.4  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..RETNQSE.E.-RK.          40
      1.6  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..REPNQSE.E.-RK.          40
      1.7  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..RETNQSE.E.-RK.          40
      1.8  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..RETNQSE.E.-RK.          40
      1.9  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..RETNQSE.E.-RK.          40
     1.11  -------------------------------------------------------------MD..TVT.LAMA.GVEK....-.G.DR..RETNQSE.E.-RK.          40
      2.2  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
      2.4  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
      2.5  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
      2.7  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
      2.8  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
     2.10  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QQ.S.V-...         55
     2.11  --------------------------------------------------MEQTKDGLMANDPGLDA.TRKEYE...D...RMVK.-.G.E.G.RA-.QR.S.V-...         55
      3.1  ------------------------------------MMDSQSNSTDLFDEAHGENITGRSGERQK.NSTGLRG.RQ.E.N..Q.G.R.MV.K-ERQE.Q..E-MQQQR-S--.K    73
      3.3  ------------------------------------MMDSQSNSTDLFDEAHGENITGRSGERQK.NSTGLRG.RQ.E.N..Q.G.R.MV.K-ERQE.Q..E-MQQQR-S--.K    73
      3.4  ------------------------------------MMDSQSNSTDLFDDAHGENITGRSGERQK.NSTGLQG.RQ.E.N..Q.G.R.MV.K-ERQE.Q..E-MQQQR-S--.K    73
     S3.1  MQRHERNLKQDWMTRIEWLKTTDWKIDNELDNGKAKMHGETALFFWDKHKEKKNTGLAGERQKGNGTTSQE.RRIE.NN.QVR...TP.K-EQWGKQ..E-RQQERRS--EK      108
      4.1  ----------MDTTEKENGQDTNRKRNSEQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEGQM.A.SQK...LNKL....RYQ.       101
      4.3  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEGQM.A.SQK...LNKL....RYQ.       101
      4.4  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.D.QSIASI.SVK.TEGQR.A.SQK...LNKL....RSQ.       101
      4.5  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEGQM.A.SQK...LNKL....RYQ.       101
      4.6  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEGQM.A.SQK...LNKL....RYQ.       101
      4.9  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.D.QSIASI.SVK.TEGQR.A.SQK...LNKL....RSQ.       101
     4.10  ----------MDTMEKENGQDTNGKRNREQGNATNMLERTQNEDARENSNETWATVVSKKKEGKG..QE.K.D.QSTAII.SVK.TEGQR.A.SQK...LNKI....RYQ.       101
     4.11  ----------MDTMEKENGQDTNGKRNREQGNATNMLERTQNEDARENSNETWATVVSKKKEGKG..QE.K.D.QSTASI.SVK.TEGQR.A.SQK...LNKI....RYQ.       101
     4.12  ----------MDTTEKENGQDTNEERNGEQGNATNMFERTRNEDAGENSKETWATVVSKKKEGKGCGQE.K.D.QSNASI.S.K.IEGQR.A.SQK...LNKL....RYQ.       101
     4.14  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAGENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEEQM.A.SQK...LNKL....RYQ.       101
     4.15  ----------MDTTEKENGQDTNGKRNREQGNATNMLERTRNEDAEENSNETWATVVSKKKEGKG.GQE.K.N.QSIASI.S.K.TEGQM.A.SQK...LNKL....RYQ.       101
      5.3  ------------------------------MESTKDKFTGLSGKTRGENNTEMDGEKQRGDDTGVREGKQMG.N.AQGG...M..M-ERQE.-..Q--ERQHER-R.K           73
      5.5  ------------------------------MESTKDKFTGLSGKTRGESNTEMDGEKQRGDDTGVREGKQMG.N.ARGG...M..M-ERQE.-..Q--ERQHER-R.K           73
      5.6  ------------------------------MESTKDKFTGLSGKTRGENNTEMDGEKQRGDDTGVREGKQMG.N.AQGG...M..M-ERQE.-..Q--ERQHER-R.K           73
      6.1  -----------------------------MADGCTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      6.2  -----------------------------MADGCTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      6.3  -----------------------------MADGCTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      6.5  -----------------------------MADGCTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      6.6  -----------------------------MADGYTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      6.7  -----------------------------MADGYTATNTDMAGETRLVKDNGLAGGTRKAIDIGLGG.T.TA..N..AGG.SK..E-.G.DK.PRNGNKTE.SKFAE.          78
      7.1  ------------------------------------------------------------------------------------MEKQRGE.IVSMDGDDGQ.R.            21
      7.3  ------------------------------------------------------------------------------------MEKQRGE.IVSMDGDDGQ.R.            21
      7.4  ------------------------------------------------------------------------------------MEKQRGE.IVSLDGDDGQ.R.            21
      7.5  ------------------------------------------------------------------------------------MEKQRGE.IVSMDGDDGQ.R.            21
      7.6  ------------------------------------------------------------------------------------MEKQRGE.IVSMDGDDGQ.R.            21
```

1

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                   120              140              160              180              200              220
                    |                |                |                |                |                |
Consensus  KYLKEATVIINVEDVEEVRAEDIIKAVTEKCGXGKILALRPKQNKEYELTMESEEECEKLLDGLMINGENCEVKKLQNRDYVVSFLHLPVYLEDEEILEKLDGWGVCPISKI 157
      1.1  I.......TVDIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...H......... 152
      1.4  I.......TVDIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...Y......... 152
      1.6  I.......TVEIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D.F.H......... 152
      1.7  I.......TVDIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...H......... 152
      1.8  I.......TVDIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...Y......... 152
      1.9  I.......TVDIGQAT....M.V......RI.D.....V...H.....V.L.R..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...Y......... 152
     1.11  I.......TVDIGQAT....M.V......RI.D...VV...H.....V.LKR..DADE.T.E.T.K..I...A..R..........M.....VA.KD..D...H......... 152
      2.2  .........Q.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
      2.4  .........K.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
      2.5  .........Q.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
      2.7  .........K.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
      2.8  .........K.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
     2.10  .........K.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
     2.11  .........Q.............I....H.......R.G.........T..L..Q.T.K.....V...I...H...F...M........K........T..... 167
      3.1  ..M......L..DK.K...VLE..N........L.....I..R.D.D....L.N..T.D..M...I.K..T....M.........M...A..D.QL..D..E....F..T.. 185
      3.3  ..M......L..DK.K...VLE..N........L.....I..R.D.D....L.N..T.D..M...I.K..T....M.........M...A..D.QL..D..E....F..T.. 185
      3.4  ..M......L.MDK.K...VLE..N........L.....I..R.D.D....L.N..T.D..M...I.K..T....M.........M...A..D.QL..D..E....F..T.. 185
     S3.1  ..K.....L.L..DKIK...VL...N.I.....H.....I..R.E.Q..I.F.T..T.D.....K.K.......S..........M...A....QI..D..E....F...DF 220
      4.1  E.K....LTMMIK...NSTINN.....ED.V.I..LIG..R.N.N.F.......K...I.IN.......E......CATEKM....N..S.IQ....QQ.VSN...T..LP. 213
      4.3  E.K....LTMM.R.I..NATINN.....ED.V.I..LIG..R.N.N.F.......K...I.IN.......E..M...CATEKM....N..S.IQ....QQ..SN...T..LP. 213
      4.4  E.K....LTMM.R.I..NSTINN.....ED.V.I...L.G..R.N.N.F.......K...I..N.......E..M...CATEKM....N..S.IQ....QQ..SN...T..LP. 213
      4.5  E.K....LTMMIK...NSTINN.....ED.V.I..LIG..R.N.N.F.......K...I.IN.......E......CATEKM....N..S.IQ....QQ..SN...T..LP. 213
      4.6  E.K....LTMMIK...NSTINN.....ED.V.I..LIG..R.N.N.F.......K...I.IN.......E......CATEKM....N..S.IQ....QQ..SN...T..LP. 213
      4.9  E.K....LTMM.R.I..NATINN.....ED.V.I...L.G..R.N.N.F.......K...I..N.......E..M...CATEKM....N..S.IQ....QQ..SN...T..LP. 213
     4.10  E.K....LTMM.R.I..NSTINN.....ED.V.I...L.G..R.N.N.F.......K...I..N.......E..M...CATEKM....N..S.IQ....QQ..SN...T..LP. 213
     4.11  E.K....LTMM.R.I..NSTINN.....ED.V.I...L.G..R.N.N.F.......K...I..N.......E..M...CATEKM....N..S.IQ....QQ..SN...T..LP. 213
     4.12  E.K....LTMM.R.I..NATINN.....ED.V.I...L.G..R.N.N.F.......K...I..N.......E..M...CATEKM....N..S.IQ.D..QQ..SN...T..LP. 213
     4.14  E.K....LTMMIK...NSTINN.....ED.V.I..LIG..R.N.N.F.......K...V.IN.......E......CATEKM....N..S.IQ....QQ..SN...T..LP. 213
     4.15  E.K....LTMMIK...NSTINN.....ED.V.I..LIG..R.N.N.F.......K...I.IN.......E......CATGKM....N..S.IQ....QQ..SN...T..LP. 213
      5.3  .........L..DK.K...VS.....L.....H.R...I..RKD....I.L.E..T.D..I...T..E......M..........M.........SV..........S.L... 185
      5.5  .........L..DK.K...VS.....L.....H.R...I..RKD....I.L.E..T.D..I...T..E......M..........M.........SV..........S.L... 185
      5.6  .........L..DK.K...VS.....L.....H.R...I..RKD....I.L.E..T.D..I...T..E......M..........M.........SV..........S.L... 185
      6.1  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      6.2  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      6.3  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      6.5  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      6.6  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      6.7  ............N.L..K...V...IM....Q..M.....R.G.........K........E..T...V.....S.H................NSI.V...E....E.LT.. 190
      7.1  VFQ.KL..LVEIVGEDKITMMELL.K.R.D..V--VIGC.Y.NP.......NE..GK..I....K.KNSRIM..EIN.NEM.....N..T.I.....IG..TE...KAA.PV 131
      7.3  VFQ.KL..LVEIVGEDKITMMELL.K.R.D..V--VIGC.Y.NP.......NE..GK..I....K.KNSLIM..EIN.NEM.....N..T.I.....IG..TE...KAA.PV 131
      7.4  VFQ.KL..LVEIVGEDKITMMELL.K.R.D..V--VIGC.Y.NP.......NE..GK..I....KVKNSRIM..EIN.NEM.....N..T.I.....IG..TE...KAA.PV 131
      7.5  VFQ.KL..LVEIVGEDKITMMELL.K.R.D..V--VIGC.Y.NP.......NE..GK..I....K.KNSRIM..EIN.NEM.....N..T.I.....IG..TE...KAA.PV 131
      7.6  VFQ.KL..LVEIVGEDKITMMELL.K.R.D..V--VIGC.Y.NP.......NE..GK..I....K.KNSRIM..EIN.NEM.....N..T.I.....IG..TE...KAA.PV 131
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                  240           260           280           300           320
                   |             |             |             |             |
Consensus  KRRFYPGTDIEDGTRFLKVRFPKEVASLPYSTXFETAEGPQYFRVMHSHQVKTCRLCMSPEHXVKDCPNFKCYKCEERGHFARDCTTVKCPECKRFLNKCECWMEEEEEEG- 268
1.1        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.4        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.6        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.7        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.8        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.9        .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
1.11       .......N.......V.T..........RI....................................D.V.....D.R...........KF..A.....D.NKV........G.....V- 263
2.2        ...........................KM.....T...............................ML.....E...............I..R.....N.............G...GG.- 278
2.4        ...........................KM.....T...............................ML.....E...............I..R.....N.............G...GG.- 278
2.5        ......................E....KM.....T...............................ML.....E...............I..R.....N.............G...GG.- 278
2.7        ...........................KM.....T...............................ML.....E...............I..R.....N.............G...GG.- 278
2.8        ...........................KM.....T...............................ML.....E...............I..R.....N.............G...GG.- 278
2.10       ...........................KM.....T...............................ML.....E...............H.I..R.....N.............G...GG.- 278
2.11       ...........................KM.....T...............................ML.....E...............H.I..R.....N.............G...GG.- 278
3.1        ...V....E......Y......R..I.....RL....Q.................D.M.....D...H...........DAI....D.QNY.S..............D- 296
3.3        ...V....E......Y......R..I.....RL....Q.................D.M.....D...H...........DAI....D.QNY.S..............D- 296
3.4        ...V....E......Y......R..I.....RL....Q.................D.M.....D...H...........DAI....D.QNY.S..............D- 296
S3.1       ...L....E.....H.I.A......I.....KL....M.....L..N........D.M.....D...........KN.D.....D.LKYI..........K..EV 332
4.1        R.KYH..AMVA.....V..M.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.3        R.KYH...MVA.....V..K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.4        R.KYH...MVA....VR.K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.5        R.KYH...MVA.....V..K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.6        R.KYH...MVA.....V..K.....K....NVG.M.E..M.....I.DN.L.M....S.A...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.9        R.KYH...MVA....VR.K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.10       R.KYH...MVA....VR.K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.A.TR.N.EK...V.RM- 324
4.11       R.KYH...MVA....VR.K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.A.TR.N.EK...V.RM- 324
4.12       R.KYH...MVA....VR.K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.EK...I.RM- 324
4.14       R.KYH...MVA.....V..K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
4.15       R.KYH...MVA.....V..K.....K....NVG.M.E..M.....I.DN.L.M....S.T...EK......T.RR.LQQ..YV...EVPQ.QG.E.ASTR.N.NK...V.RM- 324
5.3        ...T....E.......I.T..........K.......................VM....D.R.F..........N.DAI.....LQI.A.......A..G.E- 296
5.5        ...T....E.......I.T..........K.......................VM....D.R.F..........N.DAI.....LQI.A.......A..G.E- 296
5.6        ...T....E.......I.T..........K.......................VM....D.R.F..........N.DAI.....LQI.A.......A..G.E- 296
6.1        ...C........................RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
6.2        ...C........................RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
6.3        ...C........................RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
6.5        ...C........................RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
6.6        ...C............L...........RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
6.7        ...C........................RL.......H.......R......Q....D.LL..........R.G.W.....S....R.S..AE..D.......GK.G.K- 301
7.1        ...MW.....A.........K.TDT.K......K...LT.TEH...I.DR...V.SV.IQ.G.I.R..........GIQ..YV.E.DKG..KL..MVTAM.V.RIP...IM.S 243
7.3        ...MW.....A.........K.TDT.K......K...LT.TEH...I.DR...V..V.IQ.G.I.R..........GIQ..YV.E.DKG..KL..MVTAM.V.RIP...IM.S 243
7.4        ...ML...N.A.........K.TDT.K......K...LT.TEH...I.DR...V..V.IQ.G.I.R..........GIQ..YV.E.DKG..KL..MVTAM.V.GIP...IM.S 243
7.5        ...MW.....A.........K.TDT.K......K...LT.TEH...I.DR...V..V.IQ.G.I.R..........GIQ..YV.E.DKG..KL..MVTAM.V.RIP...IM.S 243
7.6        ...MW.....A.........K.TDT.K......K...LT.TEH...I.DR...V..V.IQ.G.I.R..........GIQ..YV.E.DKG..KL..MVTAM.V.RIP...IM.S 243
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                    340              360              380              400              420              440
                    |                |                |                |                |                |
Consensus  EIQVSRQVHEGNN-KE-EDEE-AN--Q--EERTE-EE-KLMENEG-M---X-E-EG---ENR-E-----GEEQNEENX-IELSGEE-RQD-X--TXQ-EIXAXXKVRLMDFE 350
      1.1  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      1.4  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      1.6  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      1.7  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      1.8  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      1.9  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-IDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
     1.11  .Q..G..MY..D.IQS-.---DKTTT-.EKRTES.S.KLQEN.TN.-LDRVT-.Q..TTWTQMDMT--DSLKSVL.AAELSDSNNKDLN.GQQED.FWTQMDMT-DSFQKALD 366
      2.2  .D-D.....E.-NR-.---D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE....E-VQ...QD-G.--W--SQM-...SDSF.TF.STV. 349
      2.4  .D-D.....E.-NR-.---D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE....E-VQI..QD-G.--W--SQM-...SDSF.TF.STV. 349
      2.5  .D-D.....E.-.R--.-D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE...KE-VQ...QD-G.--W--SQM-...SDSF.TF.STM. 349
      2.7  .D-D.....E.-NR-.---D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE....E-VQI..QD-G.--W--SQM-...SDSF.TF.STV. 349
      2.8  .D-D.....E.-NR-.---D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE....E-VQI..QD-G.--W--SQM-...SDSF.TF.STV. 349
     2.10  .DR-D.....E.-.R--.-D--.------.AI-.----RT.E.--.----N-N-N----.GKK-.------..NE....E-VQ...QD-G.--W--SQM-...SDSF.TF.STV. 350
     2.11  .DR-D.....E.-.R--.-D--.------.AI-.----RT.E.--.----N-N-N----.KK-.------..NE....E-VQ...QD-G.--W--SQM-...SDSF.TF.STV. 350
      3.1  .....G.M....S-EK-.---S--.-.--EEEQTT.QT--IQTTTE.--I---TLKE.NAKK.KEK.TETD-SQQIEH.EE-VAWTPMDITSSFKNVLDVI.KEDL-.EQSKGTD 390
      3.3  .....G.M....S-EK-.---S--.-.--EEEQTT.QT--IQTTTE.--I---TLKE.NAKK.KEK.TETD-SQQIEH.EE-VAWTPMDITSSFKNVLDVI.KEDL-.EQSKGTD 390
      3.4  .....G.M....S-EK-.---S--.-.--EEEQTT.QT--IQTTTE.--I---TLKE.NAKK.KEK.TETD-SQQIEH.EE-VAWTPMDITSSFKNVLDVI.KEDL-.EQSKGTD 390
     S3.1  .N...G.M....R-EN-.---S--.-.--EVEKTTA.V--QQTTTD.--I---T-DE.VTKGKK.K.T--D-IQQTEQ.ED-LVWTPMDITPSFKSILDAT.NEVL-.EQTKET. 423
      4.1  .T.-ASLENTATE-WK-.---DK-TG-EENNTE-.-D--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFA.EQNDEDT...NN..-.--EK-.RTEDNEIRAINEVRAMD 416
      4.3  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNKQEDKG.---ELG-..ANK.EG-.PNNRQFA.EQDDEDT...NN..-.--EK-.RTEDNEIRAINEVRAMD 416
      4.4  ...-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNKQEDKG.---ELG-..ANK.EG-.PNNRQFV.EQDDEDT...NN..-.--EK-.RTEDNEIRAINEVRAMD 416
      4.5  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFA.EQNDENT...NN..-.--EK-.RTEDNEIRAINEVRAMD 416
      4.6  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNE.EDKEI---ELG-..ANK.EG-.PNNRQFA.EQDDEDT...NN..-.--EK-.RTEDNEIRAINEVRGMD 416
      4.9  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNKQEDKG.---ELG-..ANK.EG-.PNNRQFV.EQDDEDT...NN..-.--EK-.RTEDNEIRAINEVRGMD 416
     4.10  ...-ASLENTATE-RK-.---DK-TG-EEKNTE-.-N--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFADEQYDEDTT..NI..-.--EK-.RTEDNEIRAINEVRGMD 416
     4.11  ...-ASLENTATE-RK-.---DK-TG-EEKNTE-.-N--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFADEQYDEDTT..NI..-.--EK-.RTEDNEIRAINEVRGMD 416
     4.12  ...-ESLENTATE-RK-.---DK-TE-EENNTE-.-D--RNEQEDKG.---ELG-..ANK.EE-.PNNRQFA.EQDDEDP...NN..-.--EK-.RTEDNEIRAINEVRGMD 416
     4.14  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFA.EQNDEDT...NN..-.--EK-.RTEDNEIRAINEVRGMD 416
     4.15  .T.-ASLENTATE-RK-.---DK-TG-EENNTE-.-D--RNEQEDKE.---ELG-..ANK.EG-.PNNRQFA.EQNDEDT...NN..-.--EK-.RTEDNEIRAINEVRAMD 416
      5.3  RN.IN.....KV..VEQN.G..Q.GVL.PKDLLK.IQNG.GIQEDKK.HKRN-NEDDIFC.E.H.E--ER.KM...A.ERLI.EER.-...TLFKE.EKR.EEDNENIEMETMD 404
      5.5  RN.I.....KV..VEQN.G..Q.GVL.PKDLLK.IQNG.EIQEDKK.HKRN-NEDDIFC.E.H.E--ER.KM...A.ERLI.EER.-..TLFKG.EKR.EEDNENIEMETMD 404
      5.6  RN.IN.....KV..VEQN.G..Q.GVL.PKDLLK.IQNG.GIQEDKK.HKRN-NEDDIFC.E.H.E--ER.KM...A.ERLI.EER.-...TLFKE.EKR.EEDNENIEMETMD 404
      6.1  .K..D...Q...K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNKD.----.TK-.-GGN-QMMEI.FSD-M.DN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      6.2  .K..D...Q...K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNED.----.TK-.-GGN-QMMEI.FSD-M.EN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      6.3  .K..D...Q...K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNED.----.TK-.-GGN-QMMEI.FSD-M.EN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      6.5  .K..D...Q...K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNED.----.TK-.-GGN-QMMEI.FSD-M.EN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      6.6  .K..D...Q...K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNED.----.TK-.-GGN-QMMEI.FSD-M.EN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      6.7  .K..D...Q..K-E.-D--AKLEGD.EE.ATQQR.IEQ.KN.T.EV--VDFNED.----.TK-.-GGN-QMMEI.FSD-M.EN.Q.KIE-QNKDMDY-.ED.KVDNMDKCMK 398
      7.1  SLDLYES.EDAITG..KDE.DEQ.--EE-DIMV.RRAGEEVQEP--.D--D-SQDAM--GKFPQ---KQVVQEE..LL-F.GG.NGKKGGQEK-AN.-DGKEH-.ENQRGRD 338
      7.3  SLDLYES.EDAITG..KDE.DEQ.--EE-DIMV.RRAGEEVQEP--.D--D-SQDAM--GKFPQ---KQVVQEE..LL-F.GG.NGKKGGQEK-AN.-DGKEH-.ENQRGRD 338
      7.4  SLDLYES.E.AITG..KDE.DEQ.--EE-DIMV.RRAGEEVQEP--.D--D-SQDAM--GKFPQ---KQVFQEE..LL-..GG.NGKKGGQEK-AN.-DGKEH-.ENQRGRD 338
      7.5  SLDLYES.E.AITG..KDE.DEQ.--EE-DIMV.RRAGEEVQEP--.D--D-SQDAM--GKFPQ---KQVVQEE..LL-F.GG.NGKKGGQEK-AN.-DGKEH-.ENQRGRD 338
      7.6  SLDLYES.E.AITG..KDE.DEQ.--EE-DIMV.RRAGEEVQEP--.D--D-SQDAM--GKFPQ---KQVVQEE..LL-..GG.NGKKGGQEK-AN.-DGKEH-.ENQRGRD 338
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                   460            480            500            520
                    |              |              |              |
Consensus  RXNL----E-KE-QXKEIXDLESRXMENXNKEMVGXR-QRRRXEKIKPNLETAKKK-LXRIKLSNRYEE------------  411
      1.1  TEET------.GQSID.QA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
      1.4  TEET------.GQSID.QA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
      1.6  TEET------.GQSIDKQA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
      1.7  TEET------.GQSID.QA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
      1.8  TEET------.GQSID.QA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
      1.9  TEET------.GQSID.QA...GHLQKDG...TQ.KSAK...SL.........R..L.KDEEIECANKYELLKGLEDMD--  439
     1.11  TEET------.GQSID.QA...EHLQKDG...TQ.KSAK...SL......V..R..L.KDEEIECANKYELLKGLEDMD--  439
      2.2  KEE.----R-.TG.AEGMAND.ETR...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  425
      2.4  KEE.----R-.TG.AEGMAND.ETM...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  425
      2.5  KEE.----R-.TG.AEGMAND.ETR...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  426
      2.7  KEE.----R-.TG.AEGMAND.ETM...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  425
      2.8  KEE.----R-.TG.AEGMAND.ETM...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  425
     2.10  KEE.----R-.TG.AEGMAND.ETR...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  426
     2.11  KEE.----R-.TG.AEGMAND.ETR...VD.NK.ERGFL...TF.V....DM....V.TKNRAKYVNRYEVLRGLEEDEEK  426
      3.1  .ETGKHEE.-V.KDKL.KRQTRRSAKVLSKL.TARKKGLKKGQL.SHNRYDSLRGL-GEEED------------------  450
      3.3  .ETGKHEE.-V.KDKL.KRQTRRSAKVLSKL.TARKKGLKKGQL.SHNRYDSLRGL-GEEED------------------  450
      3.4  .ETGKHEE.-V.KDKL.KRQTRRSAKVLSKL.TARKKGLKKGQL.SHNRYDSLRGL-GEEED------------------  450
     S3.1  .ETEKHEV.-T.KDNF.KRQTRRSAKALSKM.TTRKKVFKKGQL.SHNRY.FLRSL-GEED-------------------  482
      4.1  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.MK.FE-KGDARNICLSDSDSE---------  485
      4.3  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
      4.4  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
      4.5  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
      4.6  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
      4.9  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
     4.10  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
     4.11  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
     4.12  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
     4.14  FERGNCGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.FE-KGDARNICLSDSDSE---------  485
     4.15  FERGNYGL--EKKEKGKKIKDLKSRSKSGLNIEMVLQR.KI.R.E..ERM.RK.F.-KGDARNICLSDSDSE---------  485
      5.3  NSQMCGDN.V.TG.RN.EKSN.IGRE.EIKMDREER.TI...TL.......ST.R.-.T-TRMK.MNRYEVLKEMEGDDE-  482
      5.5  NSQMCGDN.V.TG.RN.EKSN.IGRE.EIKMDREER.TI...TL.......ST.R.-FT-TRMK.MNRYEVLKEMEGDDE-  482
      5.6  NSQMCGDN.V.TG.RN.EKSN.IGRE.EIKMDREER.TI...TL.......ST.R.-.T-TRMK.MNRYEVLKEMEGDDE-  482
      6.1  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      6.2  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      6.3  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      6.5  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      6.6  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      6.7  VNLRRRTLK-VKPNLDNVRKKAKAN.F.VLRSLE.GEDE-----------------------------------------  436
      7.1  FMTR-I-L.TPLI.LE.EM.MSAGNIKMLKRK.K.TEEETTKK------------------------------------  379
      7.3  FMTR-I-L.TPLI.LE.EM.MSAGNIKMLKRK.K.TEEETTKK------------------------------------  379
      7.4  FMTR-I-L.TPLI.LE.EM.MSAGNIKMLKRK.K.TEEETTKK------------------------------------  379
      7.5  FMTR-I-L.TPLI.LE.EM.MSAGNIKMLKRK.K.TEEETTKK------------------------------------  379
      7.6  FMTR-I-L.TPLI.LE.EM..SAGNIKMLKRK.K.TEEETTKK------------------------------------  379
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5

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                          20            40            60            80           100
Consensus -----MMFRFLISFLFLLMVLNCVSFNARGLMDKXKFEKVKEKCKRKDVICLQETNWKEEVMNDFKKXWQGDILYNNGDGKSGRGVAILIKKDVLNFKKIVYNDKEGKCLX 106
     1.1  -MFFMNV.MSFMNVFIFF...GI.........L.IR.......M...E...L......R..C.KEIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 110
     1.4  MMFFMNV.MSFMNVFIFF...GI.......FL.IR.......M...E...L......R..C.IEIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
     1.5  MMIFMNV.MSFMNVFMFF...GI.........L.IR.......M...E...L......R..C..EIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
     1.6  -MFFMNV.MSFMNVFIFF...GI.........L.IR.......M...E...L......R..C..EIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 110
     1.8  MMFFMNV.MSFMNVFIFF...GI.......FL.IR.......M...E...L......R..C.IEIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
     1.9  MMFFMNV.MSFMNVFIFF...GI.......FL.IR.......M...E...L......R..C.IEIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
    1.10  MMIFMNV.MSFMNVFMFF...GI.........L.IR.......M...E...L......R..C..EIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
    1.11  MMFFMNV.MSFMNVFIFF...GI.........L.IR.......M...E...L......R..C..EIR.R.S.EM.......RL.......L.ENSGVLC.TI........MI 111
     2.1  ----MR.C........I................G.D....IR....N.E..G.....HA......L.....I..........F..R......R...R.NY....V 107
     2.2  ----MR.C........I................G.D....IR....H.E..G.....HA.D....L.....I..........F..R......R...R.NY....V 107
     2.3  ----MRIC........I................G.D....IR....H.E..G.....HA.D....L....FI..........F..R......R...R.NY....V 107
     2.5  ----MR.C........I................G.D....IR....H.E..G.....HA.D....L.....I..........F..R......R...R.NY....V 107
     2.7  ----MR.C........I................G.D....IR....H.E..G.....HA.D....L.....I..........F..R......R...R.NY....V 107
     2.8  ----MR.C........I................G.D....IR....H.E..G.....HA.D....L.....I..........F..R......R...R.NY....V 107
    2.10  ----MR.C........I................G.D....IR....N.E..G.....HA......L.....I..........F..R......R...R.NY....V 107
    2.11  ----MR.C........I................G.D....IR....N.E..G.....HA......L.....I..........F..R......R...R.NY....V 107
    S2.1  ----MR.C........I................G.D....IR....N.E..G.....HA......L.....I..........F..R......R...R.NY....V 107
    S2.2  ----MR.C........I................G.D....IR....N.E..G.....HA......L.....I..........F..R......R...R.NY....V 107
     3.1  -------MTVF...FL.................LR..KN.......EEI.I.......N...DIY..E.D..FY.S...T.A..........NA.QMS.VI.K..Q...MI 104
     3.3  -------MTVF...FL.................LR..KN.......EEI.I.......N...DIY..E.D..FY.S...T.A..........NA.QMS.VI.K..Q...MI 104
     3.4  -------MTVF...FL.................LR..NN.......EEI.I.......N...DIY..E.D..FY.S...T.A..........NA.QMS.VI.K..Q...MI 104
     4.5  ----------------MSNVCV..L.V...SKCE...RLTCLT.KC.IL.....K.EN.IK.EMR.L.N.E.-FS..NIEKN........RGIFEKVELD.K.TN.RIII 93
    4.10  ---------------MSNVCV..L.V...SKCE...RLTCLT.KC.IL.....K.EN.IK.EMR.L.N.E.-FS..NIEKN........RGIFEKVELD.K.TN.RIII 93
    4.11  ---------------MSNVCV..L.V...SKCE...RLTCLT.KC.IL.....K.EN.IK.EMR.L.N.E.-FS..NIEKN........RGIFEKVELD.K.TN.RIII 93
    4.14  ---------------MSNVCV..L.V...SKCE...RLTCLT.KC.ML.....K.EN.IK.EMR.L.N.E.-FS..NIEKN........RGIFEKVELD.K.TN.RIII 93
     5.3  -----.I.....L.........K........M.E.G....IR....N..M.V.......DY..E....K.E.............I..F......F.I...L.K.NN....V 106
     5.4  -----.I.....LS........K........M.E.G....IR..F.N..M.V.......DY..E....K.E.............F.L...F.I.....KNNN....V 106
     5.6  -----.I.....L.........K........M.E.G....IR....N..M.V.......DY..E....K.E.............I..F......F.I...L.K.NN....V 106
     5.7  -----.I.....LS........K........M.E.G....IR....N..M.V.......DY..E....K.E.............F.L...F.I.....K.NN....V 106
     5.8  -----.I.....L.........K........M.E.G....IR....N..M.V.......DY..E....K.E.............F......I.....K.NN....V 106
     6.1  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     6.2  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     6.4  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     6.5  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     6.6  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     6.7  ----MYFKYLFLFLS.....F......T...LNVG..D....L..KQNL........NDG..E...RR.R.Q.F......RM......V.E.IK.DVEEL.........A 107
     7.5  -----.WVLLFFILYAMCDL.KIACL.CN..REME...R.IR.F.T-.........H.SNDK.S.I..V.GEE.YV.H.SQRA-C.....L..GGIHNV.QIH..GN.RL.G 104
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              120            140            160            180            200            220
               |              |              |              |              |              |
Consensus IEVNYEGKEMIIANIHAPTEEKDKKEFFNVLNKVLKKXKEIIMMGDFNTVFXKQDMADGMVFKSDTGRKELKELMKENNLIDIWRERNEEKREFSRRQIVGNFICQTRIDF 217
     1.1  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K......I..E.M....V......QTK.Y.........C....... 221
     1.4  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K......I..E.M....V......QTK.Y.........C....... 222
     1.5  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K....Q.I..E.M....V......QTK.Y.........C....... 222
     1.6  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K......I..E.M....V......QTK.Y.........C....... 221
     1.8  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K......I..E.M....V......QTK.Y.........C....... 222
     1.9  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K......I..E.M....V......QTK.Y.........C....... 222
    1.10  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K....Q.I..E.M....V......QTK.Y.........C....... 222
    1.11  C.ME..K.KV.MV.V......NK...Y....RDY...HERV.I........S.LE..E.....T.K....Q.I..E.M....V......QTK.Y.........C....... 222
     2.1  .......H.L..........D.....Y.E......GF.............R.................I...Q.N..I...S.........R................... 218
     2.2  .......H.L..........D.....Y.E......DF.............R.................I.....N..I...S.........R................... 218
     2.3  .......H.L..........D.....Y.E......GF.............R.................I.....N..I...S.........R................... 218
     2.5  .......H.L..........D.....E......GF.............R.................IE....N..I...S.V........RV................... 218
     2.7  .......H.L..........D.....Y.E......GF.............R.................I.....N..I...S.........R................... 218
     2.8  .......H.L..........D.....Y.E......GF.............R.................I.....N..I...S.........R................... 218
    2.10  .......H.L..........D.....Y.E......GF.............R.................I...Q.N..I...S.V........R................... 218
    2.11  .......H.L..........D.....Y.E......GF.............R.................I...Q.N..I...S.........R................... 218
    S2.1  .......H.L..........D.....Y.E......GF.............R.................I...Q.N..I...S.........R................... 218
    S2.2  .......H.L..........D.....Y.E......GF.............R.................I...Q.N..I...S.........R................... 218
     3.1  L.IK....DI.LV.V...N..SE..S...I.RRF..NY.Q..VC.......SR..ITE...............S.IE.KGM........GK.K...........VN.S...Y 215
     3.3  L.IK....DI.LV.V...N..SE..S...I.RRF..NY.Q..VC.......SR..ITE...............S.IE.KGM........GK.K..P.......VN.S...Y 215
     3.4  L.IK....DI.LV.V...N..SE..S...I.RRF..NY.Q..VC.......SR..ITE...............S.IE.KGM........GK.K...........VN.S...Y 215
     4.5  VK.L.G..SFRVC.....N.....YN.YKEID.LIE.NEN.FIL....IAMQRI.ID.S.N.RT.R..N..QN..RKCD.V.V.....GM...Y...E.ANRILK.S...L 204
    4.10  VK.L.G..SFRVC.....N.....YN.YKEID.LIE.NEN.FIL....IAMQRI.ID.S.N.RT.R..N..QN..RKCD.V.V.....GM...Y...E.ANRILK.S...L 204
    4.11  VK.L.G..SFRVC.....N.....YN.YKEID.LIE.NEN.FIL....IAMQRI.ID.S.N.RT.R..N..QN..RKCD.V.V.....GM...Y...E.ANRILK.S...L 204
    4.14  VK.L.G..SFRVC.....N.....YN.YKEID.LIE.NEN.FIL....IAMQRI.ID.S.N.RT.R..N..QN..RKCD.V.V.....GM...Y...E.ANRILK.S...L 204
     5.3  ......Q...................KI....IERY.K...V.......N...........A.......I...........K.K............D......... 217
     5.4  ......Q...................KI....IERH.K...V.......N...........A.......I...........N.K............D......... 217
     5.6  ......Q...................KI....IERY.K...V.......N...........A.......I...........K.K............D......... 217
     5.7  ......Q...................KI....IERH.K...V.......N...........A.......I...........N.K............D......... 217
     5.8  ......Q...................KI....IERY.K...V.......N...........A.......I...........N.K............D......... 217
     6.1  .RMR-.-NN.TLC.....VA..E..D...RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVV....V...G...Y....L.DGNLK.S.... 216
     6.2  .RMR-.-NN.TLC.....VA..E......RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVV....V...G...Y....L.DGNLK.S..A. 216
     6.4  .RMR-.-NN.TLC.....VA..E..D...RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVV....V...G...Y....L.DGNLK.S.... 216
     6.5  .RMR-.-NN.TLC.....VA..E..D...RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVV....V...G...Y....L.DGNLK.S.... 216
     6.6  .RMR-.-NN.TLC.....VA..E..D...RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVG....V...G...Y....L.DGNLK.S.... 216
     6.7  .RMR-.-NN.TLC.....VA..E..D...RI.DLMILWG.T.LI.......NRI.L......RN.......QK..A.HKVG....V...G...Y....L.DGNLK.S.... 216
     7.5  .DFM.YNESFRLL.LY..NI.TER..V.KTMKPLCTG--NC.VV....VWCTRL.VSKSIN....AS.RY.N...QSE.MV.A...E.PF.........VGVLK.S...L 213
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2

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                240           260           280           300           320
                 |             |             |             |             |
Consensus  ILCTRNIENFIENIQYEETSLSDHKLLHFKVNXENIQKGPGXWILNTTILKNEDYVQKVKEIIEKEKENEMYDEDKRIWWENTKYQIKKYTIKYCAVLQRCKKYKEKEVKK 328
     1.1   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 332
     1.4   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
     1.5   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS..K..Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
     1.6   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 332
     1.8   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
     1.9   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
    1.10   ......V.G..NK.K..........P.FM.LDWS.VKR...V.V...AV.......LS..K..Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
    1.11   ......V.G..NK.K.K........P.FM.LDWS.VKR...V.V...AV.......LS.....Q...G..I.N....M....V..LV..F.....RQ..N........L.E 333
     2.1   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
     2.2   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
     2.3   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
     2.5   .................N.F.........I.......T.........Q...........R................R..............Y...T.....R 329
     2.7   .................N.F.........I.......T.........Q...........R................R..............HT.....R 329
     2.8   .................N.F.........I.......T.........Q...........R................R..............HT.....R 329
    2.10   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
    2.11   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
    S2.1   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
    S2.2   .................N.F.........I.......T.........Q......N....R................R................T.....R 329
     3.1   V.......IY..K.R.D..V.....FVF.NF.T.E..R...V.T..SE........K...........G.QI.N....L....V.FL...S.LTF.RII.KN.RH...TI.E 326
     3.3   V.......IY..K.S.D..V.....FVF.NF.T.E..R...V.T..SE........K..........QI.N....L....V.FL...S.LTF.RII.KN.RH...TI.E 326
     3.4   V.......IY..K.R.D..V.....FVF.NF.TDE..R...V.T..SD..N....K.IT......V.QI.N....L....V.FL...S.LTF.RII.KN.RH...TI.E 326
     4.5   F..KKKEVQYVNT.L.KTY.E...DF.WITM.FNE.E....V.....EL..I.S.KMDIEN..INSVND..FETETGL..D.L.NK..E.S.NISEKI.KA..F..NKIR. 315
    4.10   F..KK.EVQYVNT.L.KTY.E...DF.WITM.FNE.E....V.....EL..I.S.KMNIEN..INSVND..FETETGL..D.L.NR..E.S.NISEKI.KA..F..NKIR. 315
    4.11   F..KKKEVQYVNT.L.KTY.E...DF.WITM.FNE.E....V.....EL..I.S.KMNIEN..INSVND..FETETGL..D.L.NR..E.S.NISEKI.KA..F..NKIR. 315
    4.14   F..KKKEVQYVNT.L.KTY.E...DF.WITM.FNE.E....V.....EL..I.S.KMDIEN..VNSVND..FETETGL..D.L.NR..E.S.NISEKI.KA..F..NKIR. 315
     5.3   .................N.F...........VD......T...........................R.........I....R................T.N.... 328
     5.4   .................N.F...........VD......T...........................R.........I....R................T...... 328
     5.6   .................N.F...........VD......T...........................R.........I....R................T.N.... 328
     5.7   .................N.F...........VD......T...........................R..............R................T...... 328
     5.8   .................NIF...........VD......T...........................R..............R................T.....R 328
     6.1   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     6.2   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     6.4   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     6.5   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     6.6   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     6.7   ...KEKLGD..QSVYFK..T.....F.LM.IDFNETKR.K.I.....E...G.P.RKAIVDL.NT.IQ....H........D....E......MSKSI.KA.AH..V..R. 327
     7.5   C.VK.D.LQYVK.VS.KFIEIG..AAMIV.MSLNLESR.G.M.C..ASL..E.A.RESIERC.RY.M..PLFENNVCE...DL.EK..IRS.R.SKQRNFKR.MEMESMRN 324
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                340           360           380           400           420           440
                 |             |             |             |             |             |
Consensus  SLEKELNKEN--KDIEKIKELEQKLRDLEEDKYKGAMLRSRAKYTVEGEKCTKFFFDLEKQRGKAEIIKEIKGRNGKIVKGNXEILEEIXHFYEDLFKAKGIDEEKERKLL 437
     1.1   K..N..KN..-G.N.Q.....QGR.NEM..E.FE..R...K..F.................R...S.M.R..RSK..N..EQHE......RSY..K..CTE..K.KEKGE.. 442
     1.4   K..N..KN..-G.N.Q.....QGR.NEM..E.FE..R...K..F.................R...S.M.R..RSK..NV.EQHE......RSY..K..CTE..K.KEKGE.. 443
     1.5   K..T..KN..-G.N.Q.....QER.KEM..E.FE..R...K..F.................R...S.M.R..RSK..N..EQHE......RSY..K..CTE..K.KEKGE.. 443
     1.6   K..N..KN..-G.N.Q.....QGR.NEM..E.FE..R...K..F.................R...S.M.R..RSK..NV.EQHE......RSY..K..CTE..K.KEKGE.. 442
     1.8   K..N..KN..-G.N.Q.....QGR.NEM..E.FE..R...K..F.................R...S.M.R..RSK..NV.EQHE......RSY..K..CTE..K.KEKGE.. 443
     1.9   K..T..KN..-G.N.Q.....QER.KEM..E.FE..R...K..F.................R...S.M.R..RSK..N..EQHE......RSY..K..CTE..K.KEKGE.. 443
    1.10   K..T..KN..-G.N.Q.....QER.KEM..E.FE..R...K..F.................R...S.M.R..RSK..N..EQHE......RSY..K..CTE..K.KEKGE.. 443
    1.11   K..N..KN..NG.N.Q.....QER.KEM..E.FE..R...K..F.................R...S.M.R..RSK..N..EQHE......RSY..K..CTE..K.KEKGE.. 444
     2.1   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
     2.2   ..........--.....I...............S..................G...........A..I.....KY...................I. 438
     2.3   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
     2.5   ..........--.....I...............S.............T.....G.L........A..I.....K.......E..........I. 438
     2.7   ..........--.....I...............S..................G.L.....MA..I.....K.........NQ.....I. 438
     2.8   ..........--.....I...............S..................G.L.....MA..I.....K.........NQ.....I. 438
    2.10   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
    2.11   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
    S2.1   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
    S2.2   ..........--.....I...............S..................G.L........A..I.....K....................I. 438
     3.1   N..I..D.NE--...Q...M.G..KEI..K..E..R...K...V............R.KA...T..I.Q.AK.ESIE..E...K..KKY..E...TQ.V..VQMS... 435
     3.3   N..I...E.NE--...Q....M.G..KEI..K..E..R...K...V............R.KA...T..I.Q.AK.ESIE..E...K..KKY..E...TQ.V..VQMS... 435
     3.4   N......G.NE--...Q...M.G..KEI..K..E..R...K...VA...........R.K....T..I.Q.AK.ESIE..E...K..KKY..E...TQ.V..VQMA... 435
     4.5   EWNE.MS.V.-GINVD..I..QE..KKI..E.C..VII.....DI....RS..Y.YE...T.QR.A...C..TQD..T.EDKEG..N.TRR..KE..TEN.VNLND.HF.. 425
    4.10   EWNE.MS.V.-GINVD..I..QE..KKI..E.C..VII.....DI....RS..Y.YE...T.QR.AV..C..TQD..T.EDKEG..N.TRR..KE..TEN.VNLND.HF.. 425
    4.11   EWNE.MS.V.-GINVD..I..QE..KKI..E.C..VII.....DI....RS..Y.YE...T.QR.A...C..TQD..T.EDKEG..N.TRR..KE..TEN.VNLND.HF.. 425
    4.14   EWNE.MS.V.-GINVD..I..QE..KKI..E.C..VII.....DI....RS..Y.YE...T.QR.A...C..TQD..T.EDKEG..N.TRR..KE..TEN.VNIND.HF.. 425
     5.3   ..........--.....I...............S..................G.L........A..I.....K.......E..........I. 437
     5.4   ..........--.....I...............S..................G.L........A..I.....K.......E..........I. 437
     5.6   ..........--.....I...............S..................G.L........A..I.....K.......E..........I. 437
     5.7   ..........--.....I...............S..................G.L........A..I.....K.......E..........I. 437
     5.8   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......S..................G.L........A..I.....K.......E..........I. 437
     6.1   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......CI.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.KN.. 436
     6.2   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......I.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.KN.. 436
     6.4   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......I.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.KN.. 436
     6.5   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......I.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.KN.. 436
     6.6   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......I.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.K... 436
     6.7   E.NDS..Q.K--V...R.LF..EE..NI..R.CR...I......I.D.........N..SK.NG...R.L.KE..EKI.ETQD..K.VRD...S...KGE.N.KE.K... 436
     7.5   N...IE.NPE--YTK.NFLRIKGV.EMY.TE.CE..KV...T..AL...R...Y.LN...GKQRKNY.T.L.NE..EKITDYVK...TVQL...R...KENTKQ.YVD.V. 433
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              460           480           500           520           540
               |             |             |             |             |
Consensus NYIKVKLEKDDKKECDREIXEEEIEIAINQLNKKKSPGIDGLGSEFYIVFKDILKXILKEVFKEIFKCKEMNERMGMGLMKLIYKRKGAKTELXNYRPITMLNTDLKILAK 548
     1.1  .L..SRV.EGE.R...E..R....KR..SG.........................SS.....YDD..ENG.I.K.........V...G..D.VA.K.................. 553
     1.4  .L..SRV.EGE.R...E..R....KR..SG.........................SS...G.YD...ENG.IIK.........V...G..D.VD.K.................. 554
     1.5  .L..SRV.EGE.R...E..R....KR..SG.........................SS...YD...ENG.I.K.........V...G..D.VA.K................... 554
     1.6  .L..SRV.EGE.R...E..R....KR..SG....................Y..SS...YD...ENG.I.K.........V...G..D.VD.K................... 553
     1.8  .L..SRV.EGE.R...E..R....KR..SG.........................SS...G.YD...ENG.IIK.........V...G..D.VD.K.................. 554
     1.9  .L..SRV.EGE.R...E..R....KR..SG.........................SS...G.YD...ENG.IIK.........V...G..D.VD.K.................. 554
    1.10  .L..SRV.EGE.R...E..R....KR..SG.........................SS.....YD...ENG.I.K.........V...G..D.VA.K.................. 554
    1.11  .L..SRV.EGE.R...E..R....KR..SG.........................SS.....YD...ENG.I.K.........V...G..D.VA.K.................. 555
     2.1  .........H.N.......E.........................I.N........G......D.....................................Q........... 549
     2.2  ....I.....N.......E.........K.............I.N........G................................................Q........... 549
     2.3  ..........N.......D.D.T.................I.N........G..................................................Q........... 549
     2.5  ..........N.......E.........K.............I.N........G.......T........................................Q........... 549
     2.7  ..........N.......D.....................I.N........G..................................................Q........... 549
     2.8  ..........N.......D.....................I.N........G..................................................Q........... 549
    2.10  ..........N.......E.....................I.N........G.......D..........................................Q........... 549
    2.11  ..........N.......E.....................I.N........G.......D..........................................Q........... 549
    S2.1  ..........N.......E.....................I.N........G.......D..........................................Q........... 549
    S2.2  ..........N.......E.....................I.N........G.......D..........................................Q........... 549
     3.1  KQ..T.IDEE......Q..G....RK..ES...........N....VC..E..IP..TD.....LQKE.L............H.-..E..L.K..............T. 545
     3.3  KQ..T.IDEE......Q..G....RK..ES...........N....VC..E..IP..TD.....LQKE.L............H.-..E..L.K..............T. 545
     3.4  KQ..T.VDEE......Q..G....RK..ES...........N....VC..E..IP..ID.....LQKE.L............H.-..E..L.K..............T. 545
     4.5  EK.TA..N.E..EM.ES..TDL...T..D.SRNG........PV...K...NV.IP..N.IYSD.YEKG.LTNS.KK.MV.M....N.D.GD.K....LS.....Y..... 536
    4.10  EK.TA..N.E..EM.ES..TDL...T..D.SRNG........PV...K...NV.IP..N.IYSD.YEKG.LTNS.KK.MV.M....N.D.GD.K....LS.....Y..... 536
    4.11  EK.TA..N.E..EM.ES..TDL...T..D.SRNG........PV...K...NV.IP..N.IYSD.YEKG.LTNS.KK.MV.M....N.D.GD.K....LS.....Y..... 536
    4.14  GK.TA..N.E..EM.ES..TDL...T..D.SRNG........PV...K...NV.IP..N.IYSD.YEKG.LTNS.KK.MV.M....KN.D.GD.K....LS.....Y..... 536
     5.3  ...........N.......D...................I.N.........G.................................................Q........... 548
     5.4  ...........N.......D...................I.N.........G.......D.........................................Q........... 548
     5.6  ...........N.......D...................I.N.........G.................................................Q........... 548
     5.7  ...........N.......D...................I.N.........G.................................R...............Q........... 548
     5.8  .......Q...N......D.D..................I.N.........V........M.......................................Q........... 548
     6.1  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     6.2  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     6.4  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     6.5  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     6.6  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     6.7  DQ.EG.VTE....M..E..QI...KES.M..SNG....L...V....K....V.AP....I.D.V..KQ.TTHL.RV..V.....K..E.ND.R.F..L.....F..... 547
     7.5  .TVN...SDEERET.E.D.NI...KQ..KETKVN....S...TH...KT.EE..TP..MKL..HMEERR.IP.ST.L.VITIL..N.CSPLN.E....LSL....Y...T. 544
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          560          580          600          620          640          660
           |            |            |            |            |            |
Consensus VLANRLKEVMPKIIKTNQAYAIKGRDIADVTMSIKDTIDYMQEKKMNGFLISVDFEKAFDRVEHTYLFDVLKTFGFGENFINWIKILYKGAFTKIKCNGFLTDCFKITRSI 659
   1.1    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............L.... 664
   1.4    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............L.... 665
   1.5    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.V....R..V.R............L.... 665
   1.6    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............R... 664
   1.8    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............L.... 665
   1.9    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............L.... 665
  1.10    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.V....R..V.R............L.... 665
  1.11    ..........S........S.......T........R.IND.QKD.....L...........DF..G...S.........K.VQ...R..V.R............ 666
   2.1    ...........S.L..S....................S....L.............................................................V...... 660
   2.2    ...........L..S......................S....L..........................................N.....V.......E....... 660
   2.3    ...........L..S........Y.............S....L..........----..............................................V........ 656
   2.5    ...........L..S......................S....L.............................................................V...... 660
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   5.6    ...........L..S......R...............S....L................................................L..V............. 659
   5.7    ...........L..S......................S....I.................................................V............. 659
   5.8    ...........K.L..S......................S....I.............................................E..L..V............. 659
   6.1    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV......T.......NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   6.2    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV.............NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   6.4    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV.............NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   6.5    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV.............NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   6.6    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV.............NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   6.7    ......K.L.D....S...GV..K..T.IIS..R.V.Q..K..RK..YV.............NF..E..NKV...N..LR...C..N..ISR..V...I....NV.... 658
   7.5    I....I.R.VRS..SP...HG.P....T.TICT.R.VVSS.DKDGEG.LMLCI.LN........NFMEQAMRRY....KIL....L...N.KSCV.V..V..NT.PLE..V 655
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6

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                  680              700              720              740              760
                   |                |                |                |                |
Consensus  RQGCPLSALLYSLVAEPLGLAIKQETKIKGIKIEEEEDEGKIYQYADDTTLIVKDKKSVKEAMKKVQEFCKGTGAKINENKTVYMRFGKADILTDCFQFKEVE-EIKILGI  769
1.1        ..........A...........V.H.DR....EV.-GGVN-..F.........LQ.LA...Q..EI.H....S......D....L...RTEA.SGH.T...MD-.......  772
1.4        ..........A...........V.H.DR....EV.-GGVN-..F.........LQ.LA...Q..ETI.H....S......D....L...RTEA.SGH.T...MD-.......  773
1.5        ..........A...........V.H.DI....EV.-GGVN-..F.........L..LA...K..ET.H....S......D....L...ETEA.SGH.T...MD-.......  773
1.6        ..........A...K.......V.H.DR....EV.-GGVN-..F.........LQELA...K..ET.H....S......D..G.L...RTEA.SGH.T...MD-.......  772
1.8        ..........A...........V.H.DR....EV.-GGVN-..F.........LQ.LA...Q..ETI.H....S......D....L...RTEA.SGH.T...MD-.......  773
1.9        ..........A...........V.H.DR....EV.-GGVN-..F.........LQ.LA...Q..ETI.H....S......D....L...RTEA.SGH.T...MD-.......  773
1.10       ..........A...........V.H.DI....EV.-GGVN-..F.........L..LA...K..ET.H....S......D....L...ETEA.SGH.T...MD-.......  773
1.11       ..........A...........V.H.DR....EV.-GGVN-..F.........LQ.LA...Q..ETI.H....S......D....L...RTEA.SGH.T...MD-.......  774
2.1        .............I.........................................I...E...........S......Q.................R...-.L.....  770
2.2        .............I.........................................I...E...........S......Q.................R...-.L.....  770
2.3        .............I.........................................I...E...........S......Q.................R...-.L.M...  766
2.5        .............I.........................................I...E...........S......E.................R...-.L.....  770
2.7        .............I.....T...................................I...E...........S......Q....R........R...-.L.....  770
2.8        .............I.....T...................................I...E...........S......Q....R........R...-.L.....  770
2.10       .............I.........................................I...E...........S......Q.................R...-.L.....  770
2.11       .............I.........................................I...E...........S......Q.................R...-.L.....  770
S2.1       .............I.........................................I...E...........S......Q.................R...-.L.....  770
S2.2       .............I.........................................I...E...........S......Q.................R...-.L.....  770
3.1        .......................NE.E.....E...NKVNK.MF...........G.E.......I..Q....S.S.V..D.....K...ETD.AE.TN.....-......V  766
3.3        .......................NE.E.....E...NKVNK.MF...........G.E...K...I..Q....S.S.V..D.....K...ETD.AE.TN.....-......V  766
3.4        .......................NE.E.....E...NKVNK.MF...........G.E.......I..Q....S.S.V..D.....K...ETD.AE.TN.....-......V  766
4.5        .....M.....T..S.T.....DN..Q.R.LC.KGTDL.H..F............I..IEK.EEILNRY.N.......KE..K...L..INV.PEKIK...ETVDM....  758
4.10       .....M.....T..S.T.....DN..Q.R.LC.KGTDL.H..F............I..IEK.EEILNRY.N.......KE..K...L..INV.PEKIK...EKVDM....  758
4.11       .....M.....T..S.T.....DN..Q.R.LC.KGTDL.H..F............I..IEK.EEILNRY.N.......KE..K...L..INV.PEKIK...EKVDM....  758
4.14       .....M.....T..S.T.....DN..Q.R.LC.KGTDL.H..F............I..IEK.EEILNRY........KE..K...L..INV.PEKIK...EKVDM....  758
5.3        ..............................................I...........I................S......Q.................R...-.L.....  769
5.4        .............I................................I...E.......I................S......Q.................R...-.R.....  769
5.6        ..............................................I..........I................S......Q.................R...-.L.....  769
5.7        ..............................................I...E......I................S......Q.................R...-.L.....  769
5.8        K...................D.........................I...E......S......Q.................R...-.L.....  769
6.1        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..MQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
6.2        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..MQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
6.4        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..IQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
6.5        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..IQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
6.6        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..MQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
6.7        K.......Q.....T.A..S..IRDKE.H....V.T.E.Q...........L..MQ..IN...IIERY.N.S...V.ME...V..L.N.C..P.V.K..DQK-.......  768
7.5        ........M....ISI.S.ATLV..DKE.R..Q.PYGGVS-L.H.......FT.R.MR.I.RI.NHIEVYG.AS.....IE.SEI.SI.GVGLSGCDIP..VAKEQTV...V  765
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                780         800         820         840         860         880
                 |           |           |           |           |           |
Consensus  L I G K N E R K A T E K M W D E L I R G I E R R L N F W K L R E L C L K G K V L I L N V L M T S K L W Y K L Y V T E M P C W I E K R L K K C V L D F L W E G K P P R I A Y N T I I G A T E E G G L G L I D I E Q R K N S L R V  880
     1.1   I . . R D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  883
     1.4   V . . . D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  884
     1.5   V . . R D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . . . . S . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  884
     1.6   V . . R D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  883
     1.8   V . . . D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  884
     1.9   V . . . D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  884
    1.10   V . . R D . K . . E V T . . E . I L G . . . . . . R . . . . M S . T . . . . . . S . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  884
    1.11   V . . R D . K . . E V T . . E . I L G . . Q . R . . . . M S . T . . . R . . . . . . . . V . . . . N I . . . S S . . L . M . . . . . Q . F . . . . . . . . . . . . . . A . L . . E V G K . . . . . . . V . . . . . . . .  885
     2.1   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
     2.2   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
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     2.5   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . G . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
     2.7   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . V . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
     2.8   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . V . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
    2.10   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . H . . . . I . . M . . K . . . . C . . .  881
    2.11   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . H . . . . I . . M . . K . . . . C . . .  881
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    S2.2   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . .  881
     3.1   . M . . D A . . . R D . . . E G F L T D . . . . . . Y . . . . T . T . . . . . . . . . . . . . E . . . . H V . . . L . . . M . . . . . . . . F T . . . . G . . . . . . F . . V V . E I D K . . . . . . . V . . . . . . . . .  877
     3.3   . M . . D A . T . R D . . . E G . L T D . . . . . . Y . . . . T . T . . . . . . . . . . . . . E . . . . H V . . . L . . . M . . . . . . . . F T . . . . G . . . . . . F . . V V . E I D K . . . . . . . V . . . . . . . . .  877
     3.4   . L . . D A . . . R D . . . E G F L T D . . . . . . Y . . . . T . T . . . . . . . . . . . . . E . . . . H V . . . L . . . M . . . . . . . . F T . . . . G . . . . . . F . . V V . E I D K . . . . . . . V . . . . . . . . .  877
     4.5   R V . E . . N E T R N L . . E . V L K . M . K . . H . . . . . G . F . . . . . . V . . S . F L . . M . . V . G T V S L . M S V Y . K I . A I . . . . . . D . . . S K . . . D . . . . K V . . . . . . . . . P L I . M K . I . I  869
    4.10   R V . E . . N E T R N L . . E . V L K . M . K . . H . . . . . G . F . . . . . . V . . S . F L . . M . . V . G T V S L . M S V Y . K I . A I . . . . . . D . . . S K . . . D . . . . K V . . . . . . . . . P L I . M K . I . I  869
    4.11   R . . E . . N E T R N L . . E . V L K . M . K . . H . . . . . G . F . . . . . . V . . S . F L . . M . . V . G T V S L . M S V Y . K I . A I . . . . . . D . . . S K . . . D . . . . K V . . . . . . . . . P L I . M K . I . I  869
    4.14   R V . E . . N E T R N L . . E . V L K . M . K . . H . . . . . G . F . . . . . . V . . S . F L . . M . . V . G T V S L . M S V Y . K I . A I . . . . . . D . . . S K . . . D . . . . K V . . . . . . . . . P L I . M K . I . I  869
     5.3   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . . . . K . . . . C . . .  880
     5.4   . . . . . . . . . . . . . . D . . . . . . S . . . . . R I . . . . . . . A . . . . . . . . . . . . . I . . . . . . . . . . . . . . . . . . . G . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . I  880
     5.6   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . A . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . . . . K . . . . C . . .  880
     5.7   . . . . . . . . . . . . . . D . . . . . . S . . . . . R T . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . G . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . M . . K . . . . C . . I  880
     5.8   . . . . . . . . . . . . . . D . . . . . . S . . . . . R M . . . . . . . A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . E . . . . . . Q . . . . . . . . . . . . . . . . . . . I . . . . . K . . . . C . . .  880
     6.1   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . I . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     6.2   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . V . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     6.4   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . I . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     6.5   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . I . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     6.6   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . V . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     6.7   T F . E . G K R D K . I . . . . I . G . M . . . . E W . . Q . R V N . . . . . . . V . T . . L . . M . . V . G . . P . D H . H . Q . I . Q . L . S . I . . . . . . . . . . V L . . . . D D . . . . L . P . T . . K . M . .  879
     7.5   N . . V . T K E . . N A T . T G I L N K . K K V . G Y . . . . . . R . . . . I T V V . S . L L T . C N . I . G A V D L . V . V L N E I . E V L N N . I . G . . G V K . S N K . L . A D Y T . . . . K . . . L N I K . K A . . .  876
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               900            920            940            960            980
                |              |              |              |              |
Consensus  KIVKKYLQEENKAEWKKVMKYFLNKVGNFNLGEDILWMKTKNWMTEKLPGFYQEILSAWGKFLDGVFYQVKGRENLLNQPLFLNKSILKQGKELFFKKWMEVGILRIRDVL 991
     1.1   .M.R...D.D...A..RT.E...S.S......DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 994
     1.4   .M.R...D.D...A..RT.E...S.S....M.DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 995
     1.5   .M.R...D.D...A..RT.E...S.S......DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 995
     1.6   .M.R...D.D...A..RT.E...S.S......DN..Y.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 994
     1.8   .M.R...D.D...A..RT.E...S.S....M.DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 995
     1.9   .M.R...D.D...A..RT.E...S.S....M.DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 995
    1.10   .M.R...D.D...A..RT.E...S.S......DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 995
    1.11   .M.R...D.D...A..RT.E...S.S......DN..C.RM.KF...G..D..K.LIG......TC.HFNIQ....I.........SG..N.E.VV..R..W....T.V.... 996
     2.1   ....L.....ST...................L.......................................................E.........D.......... 992
     2.2   ..I..L.....ST...................L.......................................................E.........D.......... 992
     2.3   ....L.....ST...................L.......................................................E.........D.......... 988
     2.5   ....L.....ST...................L.......................................................E.........D.......... 992
     2.7   ..I..L.....ST...................L.......................................................E.........D.......... 992
     2.8   ..I..L.....ST...................L.......................................................E.........D.......... 992
    2.10   ....L.....ST...................L.......................................................E.........D.......... 992
    2.11   ....L.....ST...................L.......................................................E.........D.......... 992
    S2.1   ....L.....ST...................L.......................................................E.........D.......... 992
    S2.2   ....L.....ST...................L.......................................................E.........D.......... 992
     3.1   .R.....EK........T.......C....M.DG.......A....N..E..R...G...N..KQ.E.SPH....I........NN..S...V.YY...I.....KV..I. 988
     3.3   .RI....EK........T.......C....M.DG.......A....N..E..R.......N..KQ.E.SPH....I........NN..S...V.YY...I.....KV..I. 988
     3.4   .RI....EK........T.......C....M.DG.......A....N..E..R.......N..KQ.E.SPH....I........NN..S...V.YY...I.....KV..I. 988
     4.5   .T.N..WK..-.HV..D..R.....C.--.EIQ.Y.....P.EN.MN.V.E..K.VIK...D.RKHIDCSF-.SK.EI.K......EY.KEGNNTI.Y...FNA..KQ.K.I. 976
    4.10   .T.N..WK..-.HV..D..R.....C.--.EMQ.Y.....P.EN.MN.V.E..K.VIK...D.RKHIDCSF-.SK.EI.K......EY.KEGNNTI.Y...FNA..KQ.K.I. 976
    4.11   .T.N..WK..-.HV..D..R.....C.--.EMQ.Y.....P.EN.MN.V.E..K.VIK...D.RKHIDCSF-.SKDEI.K......EY.KEGNNTI.Y...FNA..KQ.K.I. 976
    4.14   .T.N..WK..-.HV..D..R.....C.--.EMQ.Y.....P.EN.MN.V.E..K.VIK...D.RKHIDCSF-.SK.EI.K......EY.KEGNNTI.Y...FNA..KQ.K.I. 976
     5.3   ....L.....ST...................L.......................................................E.........N.......... 991
     5.4   ....L.....ST...................L...................................A...................E.........D.......... 991
     5.6   ....L.....ST...................L.......................................................E.........N.......... 991
     5.7   ....L.....ST...................L...........................G...........................E.........D.......... 991
     5.8   .VI..L.....ST...................L.......................................................E.........D.......... 991
     6.1   .VI....NKKF.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........AN..T.E..VY..Y.L.A.VCQVK... 990
     6.2   .VI....NK.F.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........GN..T.E..VY..Y.L.A.VCQVK... 990
     6.4   .VI....NK.F.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........GN..T.E..IY..Y.L.A.VCQVK... 990
     6.5   .VI....NK.F.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........GN..T.E..VY..Y.L.A.VCQVK... 990
     6.6   .VI....NK.F.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........GN..T.K..VY..Y.L.A.VCQVK... 990
     6.7   .VI....NK.F.....H..RFY...C.G..MND......L.QS.ITGI.E..R.V.Q..SE..NH.DFKPE..NM.........GN..T.K..VY..Y.L.A.VCQVK... 990
     7.5   ..M..L.YGNEEFG..GF.REY.S.SSG--.C..EGVF.SL.KP.Y.NI.V....VC...SE.VME.G.ECENINQIHK..V...PK.QMR.RMFYNRLY.KA..RQVK.MV 985
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                 1,000          1,020          1,040          1,060          1,080          1,100
                 |              |              |              |              |              |
Consensus  YEFKEGFLPKQYIVDLMEEAKEEYSRKEIEKKLEIVKGAIPKEWITRIENME- EXGNEKVVHVYL- K- EKLCNFKDCLLKDFYVYFRDSVFKEPIANNFWVQRXNSVKKEN 1099
     1.1   ........QV..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.KF-G- ..WW.L..STV.MI.GF...G...K.RS.EY.IRMFKD.NED. 1102
     1.4   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.KF-G- ..WW.L..STV.KI.GF...G...K.R..EY.IRMFKD.NED. 1103
     1.5   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.RF-G- ..WW.L..STV.MI.GF...G...K.R..EY.IRMFKD.NED. 1103
     1.6   ........V..VI.V.D....DFN.QNLI.EYD.I.N...A..L........- .NKHS.DMI.RF-G- ..YW.L..STV.MI.GF...G...K.R..EY.IRMFKD.NED. 1102
     1.8   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.KF-G- ..WW.L..STV.KI.GF...G...K.R..EY.IRMFKD.NED. 1103
     1.9   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.KF-G- ..WW.L..STV.KI.GF...G...K.R..EY.IRMFKD.NED. 1103
    1.10   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.RF-G- ..WW.L..STV.MI.GF...G...K.R..EY.IRMFKD.NED. 1103
    1.11   ........V..VI.V.D....DFN.QDLI.EYD.I.N...A..L........- .NKQS.D.I.RF-G- ..WW.L..STV.MI.GF...G...K.RS.EY.IRMFKD.NED. 1104
     2.1   ....K...T................V....N...T................- .C.....I....-.-G........................Q...........L....... 1100
     2.2   ....K...T................V....N...T................- .G....II..N.-.-G...D....................Q...........L....... 1100
     2.3   ....K....................V....N...T................- .G....II....-.-G........................Q...........L....... 1096
     2.5   ....K...T................V....N...T................- .C.....I....-.-G...D....................Q...........L....... 1100
     2.7   ....K...T................V....N...T.S.............- .G....II....-.-G........I...............Q...........L.N..... 1100
     2.8   ....K...T................V....N...T.S.............- .G....II....-.-G........I...............Q...........L.N..... 1100
    2.10   ....K....................V....N...T................- .C.....I...C.-.-G........................Q...........L....... 1100
    2.11   ....K.................T...V....N...T................- .C.....I....-.-G........................Q...........L....... 1100
    S2.1   ....K....................V....N...T................- .C.....I....-.-G........................Q...........L....... 1100
    S2.2   ....K....................V....N...T................- .C.....I....-.-G........................Q...........L....... 1100
     3.1   ........TE..VI.T........N......N.D.I.Q.......RS..KF.-KEKET.E.Y.KT-G- ...I...NE.TV.NI.CF..EN......T..KY.IEKYKN..ANE 1096
     3.3   ........TE..VI.T........N......N.D.I.Q.......RS...F.-KEKET.E.Y.KT-G- ..IG..NE.TV.NI.CF..EN......T..KY.IEKYKN..ANE 1096
     3.4   ........TE..VI.T........N......N.D.I.Q.......KS...F.-KEKET.E.Y.KT-G- ...I...NE.TV.NI.CF..EN......T..KY.IEKYKN..ANE 1096
     4.5   ..VIP.YVQA.V.K.AII.NY.NE.KRV..NQFNNL.KN.....KEI...KL- .MHRDEGRGINF- .- NQYA...GI..M..SCL.KD..VT.K.EEY.KRLYPNIE.KE 1084
    4.10   ..VIP.YVQAHV.K.AII.NY.NETKRV...Q.NNL.KN.....KEI...KF- .MHSDEGRVINF- .- NQYA...GI..M..SCL.KD..VT.K.EEY.KRLYPNIE.KE 1084
    4.11   ..VIP.YVQAHV.K.AII.NY.NETKRV...Q.NNL.KN.....KEI...KF- .MHSDEGRVINF- .- NQYA...GI..M..SCL.KD..VT.K.EEY.KRLYPNIE.KE 1084
    4.14   ..VIP.YVQAHV.K.AII.NY.NETKRV...Q.NNL.KN.....KEI...KL- .MHRDEGRVINF- .- NQYA...GI..M..SCLCKD..VT.K.EEY.KRLYPNIE.KE 1084
     5.3   ....K...N................V....N...T................- .G.....I....-.-G...D....................Q...........L...E... 1099
     5.4   ....K....................V....N...T.S.............- .G....II..N.-.-G...D....................Q...........L...E... 1099
     5.6   ....K...N................V....N...T................- .G.....I....-.-G...D....................Q...........L...E... 1099
     5.7   ....K...T................V....N...T................- .G....II..N.-.-G...D....................Q...........L....... 1099
     5.8   ....K...T.S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1099
     6.1   ..II.....S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     6.2   ..I......S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     6.4   ..I......S.V....A.DGIGKDIK.ETLV.QF....S.......VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     6.5   ..I......S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     6.6   ..I......S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     6.7   ..I......S.V....A.DGIGKDIK.ETLV.QF....S.L.....VK..QNN- .S- .DN- .K.F.- - ..EKD.QE.V..N..IC..NK.H.R.VSEQ..KKIFVEIDE.G 1096
     7.5   ...VK....NRA.Y.SVV.WDD.IKKSQVDSVC.NIRVSL..R.VEM..RESARP..WGMPEMFIV.NG.KICLS.VIT.TI.GI.VEKEI.L.ASE.V.PKLFPNLNVKT 1096
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                1,120              1,140              1,160              1,180              1,200              1,220
                  |                  |                  |                  |                  |                  |
Consensus  IWKNMRGKIIETKLECFEYFIRHKAIFTECILTKIGMEENATCKVCFQEDEGILHLFLYCKELECFYXKCKKMLKDLL- KXWDEEELEWXTLVMFGWNMENKNKKFVNLLI 1209
    1.1    ..A.IK..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE.Y.SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1211
    1.4    ..A.IN..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1212
    1.5    ..A.IN..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1212
    1.6    ..A.IK..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1211
    1.8    ..A.IN..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1212
    1.9    ..A.IN..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1212
   1.10    ..A.IN..LVQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1212
   1.11    ..A.IK..LEQS.V.NL..L..N..V..DI..N......SV.....QDA...F.......N..KD.NE...SIILT.K- GER.D.- ...EKVL.L.V.K.CN.E.LI...V 1213
    2.1    ...........R...................HI.Q..............................K..Q........- .D....Q...N.........Q........ 1210
    2.2    ...........R...................QR.P..............................M..Q........- .D...Q...N................... 1210
    2.3    ....I......R...................QR.P..............................K..Q........- .D...Q...N................... 1206
    2.5    ...........R...................HI.Q..............................M..Q........- .D...Q...N................... 1210
    2.7    ....I......R...................QR.H..............................M..Q........- .D...DQ...N.................. 1210
    2.8    ....I......R...................QR.H..............................M..Q........- .D...DQ...N.................. 1210
   2.10    ...........R...................HI.Q..............................K..Q........- .D...Q...N.........Q........ 1210
   2.11    ...........R...................HI.Q..............................K..Q........- .D...Q...N.........Q........ 1210
   S2.1    ...........R...................HI.Q..............................K..Q........- .D...Q...N.........Q........ 1210
   S2.2    ...........R...................HI.Q..............................K..Q........- .D...Q...N.........Q........ 1210
    3.1    ..G..K.RYV...V..L.FL.......SDV..N.....QSGM....QK.E..F..M....QK..G.LKD..VLI.G..- GD...N.T..NRV..L...KN.E...I...C. 1206
    3.3    ..G..K.RYV...V..L.FL.......SDV..N.....QSGM....QK.E..F..M....Q...G.LKD..VLI.G..- GD...N.T..NRV..L...KN.E...I...C. 1206
    3.4    ..G..K.RYV...V..L.FL.......SDV..N.....QSGM....QK.E..F..M....Q..G.LKD..VLI.G..- GD...N.T..NRV..L...KN.E...I...C. 1206
    4.5    ..Q.L.AWWKSPV..N.D.IL.QNCLLS.MR.C...LAND.R....NE.........FK....K..IG.I.E..NEMG- IENEVVDE..E..FL..CKT.G..TR.I.FIL 1194
   4.10    ..QHV.AWWKSPV..N.D.IL.QNC.LS.MR.C...LAND.R....NE.........FK....K..IG.I.E..NEMG- IENEVVDE..E..FL..CKT.G..TR.I.FFL 1194
   4.11    ..QHV.AWWKSPV..N.D.IL.QNC.LS.MR.C...LAND.R....NE.........FK....K..IG.I.E..NEMG- IENEVVDE..E..FL..CKT.G..TR.I.FFL 1194
   4.14    ..Q.L.AWWKSPV..N.D.IL.QNCLLS.MR.C...LAND.R....NE.........FK....K..IG.I.E..NEMG- IENEVVDD..E..FL..CKT.G..TR.M.FIL 1194
    5.3    ...........R..........R..........QR.P.............................M..Q........- .D....Q...N................... 1209
    5.4    ...........R......................HI.Q............................M..Q........- .D...Q...N.........Q........ 1209
    5.6    ...........R..........R..........QR.P.............................M..Q........- .D...Q...N................... 1209
    5.7    ......E....R......................QR.P.............................M..Q........- .D...QF..N................... 1209
    5.8    ...........R......................QR.P.........D..................M..Q........- .D...Q...N................... 1209
    6.1    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMASETEQI.E.TEWYKI.LFGFNGSKTRIA..FL 1207
    6.2    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMPSETEQI.EDTEWYKI.LFGFNGNKTRIA..FL 1207
    6.4    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMPSETEQI.EDTEWYKI.LFGFNGSKTRIA..FL 1207
    6.5    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMPSETEQI.EDTEWYKI.LFGFNGSKTRIA..FL 1207
    6.6    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMPSETEQI.EDTEWYKI.LFGFNGSKTRIA..FL 1207
    6.7    ....LKW.YLDA.I.MLD.....NV....TK.AQ..SS...L..I.GL.N...M....K.V..NT.MA.L.E.M.QMMPSETEQI.EDTEWYKI.LFGFNGSKTRIA..FL 1207
    7.5    ....LNV.YNSLDC.NLDFKL..NR.Y.KVVIHQ.NRNV.RE.D..KSDP.TLM.I.FE....GF.HE.L.QLI..NW- GKNAQG- N..KQ.FL..E.TNC.E.N- ...CN 1204
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                   1,240            1,260            1,280            1,300
                     |                |                |                |
Consensus  MMIKKCIWERRNVAKQEKVVLNVWNVFKRKMERYIEXLYYYFKGEDMLPSFYDVFNDEVYNVLNGL-KWKMPKE---------------- 1282
      1.1  .LM.SAV....VA..K..A..D........V.K.V.C.F....L...QEA.....TQ..SKI..DT-GM...F---------------- 1283
      1.4  .LM.SA.....VA..K..A..D........V.K.V.C.F....L...QEA.....TQ..SKI..DT-GL...F---------------- 1284
      1.5  .LM.SA.....VA..K..A..D........V.K.V.FVLLF------------------------------------------------ 1253
      1.6  .LM.SA.....VA..K..A..DA.......V.K.V.C.F....L...QEA.....TQ..SKI..DT-GM...F---------------- 1283
      1.8  .LM.SA.....VA..K..A..D........V.K.V.C.F....L...QEA.....TQ..SKI..DT-GL...F---------------- 1284
      1.9  .LM.SA.....VA..K..A..D........V.K.V.C.F....L...QEA.....TQ..SKI..DT-GL...F---------------- 1284
     1.10  .LM.SA.....VA..K..A..D........V.K.V.FVLLF------------------------------------------------ 1253
     1.11  .LM.SA.....VA..K..A.FD........V.K.V.C.F....L...QEA.....TQ..SKI..DT-GM...F---------------- 1285
      2.1  ......V.................-------------------------------------------------------------------- 1233
      2.2  ......V.................I....L.....S...R..W...................................-.......DVIL----------- 1287
      2.3  ......V.................L.........R..W..........R...............F-.......DVIL----------- 1283
      2.5  ......V.................-------------------------------------------------------------------- 1233
      2.7  ......V.................IL........KS.W.........S.......N........-.......DVIL----------- 1287
      2.8  ......V.................IL........KS.W.........S.......N........-.......DVIL----------- 1287
     2.10  ......V.........K........L.........R..C.............................DVML----------- 1287
     2.11  ......V.................L.........R..C.............................DVML----------- 1287
     S2.1  ......V.................L.........R..C.............................DVML----------- 1287
     S2.2  ......V.................L.........R..C..............................-.......DVML----------- 1287
      3.1  .LM.NAM....I...K..M.MD..GI........V.K..V.H.N.NI.SELHKILT.KACQ.FKEM-N..L.HF--------------- 1279
      3.3  .LM.NAM....I...K..M.MD..GI........V.K..V.H.N.NI.SELHKILT.KACQ.FKEM-N..L.HF--------------- 1279
      3.4  .LM.NAM....I...K..M.MD..GI........V.K..I.H.N.NI.SELHKILT.KACQ.FKEM-N..L.HF--------------- 1279
      4.5  TVARNV..N...IV..KNGK.S.CKL.Q...SELLNT.F..CNMN.KI-DV-FEKDFLSG.TYVQMTLYNVNVLLPECNCF--------- 1273
     4.10  TVARNV..N...IV..KNGK.S.CKL.Q...SELLNT.F..CNMN.KI-DV-FEKDFLNG.TYVQMALYNVNVLLPECNCF--------- 1273
     4.11  TVARNV..N...IV..NNGK.S.CKL.Q...SELLNT.F..CNMN.KI-DV-FEKDFLNG.TYVQMALYNVNVLLPECNCF--------- 1273
     4.14  TVARNV..N...IV..KNGK.S.CKL.Q...SELLNT.F..CNMN.KI-DV-FEKDFLNG.TYVQMALYNVNVLLPECNCF--------- 1273
      5.3  ......V.........A.........L.........R..W...........................S..-.......DVIL----------- 1286
      5.4  ......V.........R.........L.......-------------------------------------------------------------- 1242
      5.6  ......V.........A.........L.........R..W...........................S..-.......DVIL----------- 1286
      5.7  ......V.................IL.....S..KS.W..............................DVML----------- 1286
      5.8  ......V.........A.........L.........R..W...........................S..-.......DVIL----------- 1286
      6.1  SVARTV......IV.NKNAKIEL.KMY.K.L.N..KTVEQ..RM.EKETE..KT.MLNTPYIMYT.DGL.IDLPE-------------- 1282
      6.2  SIARTV......IV.NKNAKIEL.KMY.K.L.N..KTVEQ..RM.EKETE..KT.MLNTPYIMYT.DGL.IDLPERLCLMFSCFNTNIMS 1297
      6.4  SVARTV......IV.NKNAKIEL.KMY.KNWKTILKLWNNILEWKKKRLN.TKRLC-------------------------------- 1263
      6.5  SVARTV......IV.NKNAKIEL.KMY.K.L.N..KTVEQ..RM.EKETE..KT.MLNTPYIMYT.DGL.IDLPE-------------- 1282
      6.6  SVARTV......IV.NKNAKIEL.KMY.K.L.N..KTVEQC.RM.EKETE..KT.MLNTPYIMYT.DGL.IDLPE-------------- 1282
      6.7  SVARTV......IV.NKNAKIEL.KMY.K.L.N..KTVEQC.RM.EKETE..KT.MLNTPYIMYT.DGL.IDLPE-------------- 1282
      7.5  FFLSHARY-A-IW.RRNMAYFEAKIIDVNV.FKSVVRKNV.LMWKYLRKDV-FEEAFIHE.E.ITV-DH.KGLMLNF------------ 1277
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